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State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Inspection Report

Permit Number:	C0150009
Inspection Type:	COMPLETE OVERSITE
Inspection Date:	Tuesday, March 08, 2016
Start Date/Time:	3/8/2016 9:00:00 AM
End Date/Time:	3/8/2016
Last Inspection:	

Inspector: Keenan Storrar,
Weather: Sunny
InspectionID Report Number: 5481

Accepted by: JHELFRIC
4/7/2016

Representatives Present During the Inspection:	
OGM	Keenan Storrar
OSM	Duane Matt
Company	Vicky Miller

Permitee: **FOSSIL ROCK RESOURCES, LLC**
Operator: **FOSSIL ROCK RESOURCES, LLC**
Site: **FOSSIL ROCK MINE**
Address: **225 North 5th Street, 9th Floor, CO 81501**
County: **EMERY**
Permit Type: **PERMANENT COAL PROGRAM**
Permit Status: **INACTIVE**

Current Acreages

3,564.83	**Total Permitted**
27.83	**Total Disturbed**
	Phase I
	Phase II
	Phase III

Mineral Ownership

- [x] **Federal**
- [x] **State**
- [ ] **County**
- [x] **Fee**
- [ ] **Other**

Types of Operations

- [x] **Underground**
- [ ] **Surface**
- [ ] **Loadout**
- [ ] **Processing**
- [ ] **Reprocessing**

Report summary and status for pending enforcement actions, permit conditions, Division Orders, and amendments:

This was a complete oversight inspection with Duane Matt from OSM and Vicky Miller with the Fossil Rock mine. We met at the Emery County Court house in Castle Dale and went over the paper work for the mine site. From there we proceeded to the waste rock site and then to the main mine site. The Fossil Rock mine is in temporary cessation, but there is a plan to remine the waste rock site in the near future.

The annual report for 2015 has been assigned Task #5077. The Revisions to Name Change, Task #5089 was conditionally approved on 3/22/16.

Inspector's Signature: Keenan Storrar,
Inspector ID Number: 71

Date Thursday, March 31, 2016

Note: This inspection report does not constitute an affidavit of compliance with the regulatory program of the Division of Oil, Gas and Mining.

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REVIEW OF PERMIT, PERFORMANCE STANDARDS PERMIT CONDITION REQUIREMENTS

1. *Substantiate the elements on this inspection by checking the appropriate performance standard.*
   a. *For COMPLETE inspections provide narrative justification for any elements not fully inspected unless element is not appropriate to the site, in which case check Not Applicable.*
   b. *For PARTIAL inspections check only the elements evaluated.*
2. *Document any noncompliance situation by reference the NOV issued at the appropriate performance standard listed below.*
3. *Reference any narratives written in conjunction with this inspection at the appropriate performace standard listed below.*
4. *Provide a brief status report for all pending enforcement actions, permit conditions, Divison Orders, and amendments.*

	Evaluated	Not Applicable	Comment	Enforcement
1. Permits, Change, Transfer, Renewal, Sale	☑	☐	☑	☐
2. Signs and Markers	☑	☐	☑	☐
3. Topsoil	☑	☐	☑	☐
4.a Hydrologic Balance: Diversions	☑	☐	☑	☑
4.b Hydrologic Balance: Sediment Ponds and Impoundments	☑	☐	☑	☐
4.c Hydrologic Balance: Other Sediment Control Measures	☑	☐	☐	☐
4.d Hydrologic Balance: Water Monitoring	☑	☐	☑	☐
4.e Hydrologic Balance: Effluent Limitations	☑	☐	☑	☐
5. Explosives	☐	☑	☐	☐
6. Disposal of Excess Spoil, Fills, Benches	☐	☑	☐	☐
7. Coal Mine Waste, Refuse Piles, Impoundments	☑	☐	☑	☐
8. Noncoal Waste	☑	☐	☐	☐
9. Protection of Fish, Wildlife and Related Environmental Issues	☑	☐	☐	☐
10. Slides and Other Damage	☑	☐	☐	☐
11. Contemporaneous Reclamation	☑	☐	☐	☐
12. Backfilling And Grading	☑	☐	☐	☐
13. Revegetation	☑	☐	☐	☐
14. Subsidence Control	☑	☐	☐	☐
15. Cessation of Operations	☐	☑	☐	☐
16.a Roads: Construction, Maintenance, Surfacing	☑	☐	☐	☐
16.b Roads: Drainage Controls	☑	☐	☐	☐
17. Other Transportation Facilities	☑	☐	☐	☐
18. Support Facilities, Utility Installations	☑	☐	☐	☐
19. AVS Check	☑	☐	☑	☐
20. Air Quality Permit	☑	☐	☐	☐
21. Bonding and Insurance	☑	☐	☑	☐
22. Other	☐	☐	☐	☐

1. Permits, Change, Transfer, Renewal, Sale

The Trail Mountain mine owned by PacifiCorp was purchased by Fossil Rock Resources, LLC and renamed the Fossil Rock mine in 2015. The permit was transferred on October 8, 2015 and permit renewal is on October 8, 2020.

2. Signs and Markers

Signs are posted at the entrance to the waste rock site and as one passes the mine heading in both the up- and down-canyon direction.
Perimeter markers along the North, South and West edges of the perimeter need maintenance. The signs were difficult to find and in many cases the sign had slid down on the post and had vegetation blocking it (Photo 9).
The Permittee agreed the perimeter marker signage was in need of repair and planned on getting them painted for better visibility.

3. Topsoil

The topsoil pile at the mine was stable and is clearly marked.

4.a Hydrologic Balance: Diversions

Drainage at the main mine site was in proper functioning order. The Permittee was working to clean up a sediment deposit at the upper end of the concrete diversion ditch on the east side of the property.

NOV #21172 is issued requiring the Permittee to address three non-compliance issues with Diversions at the waste rock site. Drainage at the waste rock site does not match the designs or narrative in the MRP for Ditch DA, Ditch DB, and the ASCA at the southern end of the Subsoil Pile. Attachment A provides photos showing the condition of the ditches and the ASCA with Figure 1 identifying the photo locations at the waste rock site. The three non-compliance issues are as follows:

1. Ditch DA: Photos 2, 3, and 4 show the condition of Ditch DA. It is not maintained to function as a V-ditch with 2.5:1 side slopes as outlined in the MRP. In its current state the ditch is box cut with nearly vertical side slopes and a flat ~2 ft wide bottom. As stated in Volume 4, Appendix C, 'Drainage Control Design' for Ditch DA (see attached highlighted text from the MRP), "Ditch DA will be a V-ditch for the entire length until it approaches the pond where the slope increases from 2 to 18%". A cross-section of 'Ditch DA DETAIL 1' for this upper section is shown on Drawing 4-14 (CM-10877-WB), titled 'Interim Surface Refuse Drainage Plan'.

2. Ditch DB: Photos 5 and 6 show Ditch DB has not been maintained as designed in Volume 4, Appendix C, 'Drainage Control Design' stating, "Ditch DB will be a narrow trapezoidal ditch for its entire length". The ditch design calls for a, "2 foot bottom width, [and] 2:1 side slopes". Photo 6 shows Ditch DB is non-existent through this section and an access road has been constructed in its place. This disruption has prevented runoff from being properly routed to the sediment pond.

3. ASCA, southern end of Subsoil Stock Pile: Photo 8 shows there is no clear runoff flow path on the southern end of the Subsoil Stock Pile that directs water to the silt fence in Photo 7. The silt fence in Photo 7 needs to be properly maintained.

4.b Hydrologic Balance: Sediment Ponds and Impoundments

The sediment pond at the waste rock site is in proper functioning order.

The inlet to sediment pond at the mine site needs maintenance (Photo 10). At the top of the hardened inlet, runoff is overtopping the diversion and scouring out the side bank. This area must be repaired.

The Permittee has submitted the certified 4th quarter pond inspections to the Division. The ponds were inspected on 12/09/15 and 12/15/16.

4.d Hydrologic Balance: Water Monitoring

Water monitoring has been submitted for the fourth quarter of 2015. Baseline water monitoring must be completed during 2016.

4.e Hydrologic Balance: Effluent Limitations

Currently the DWQ website for UPDES permits shows the current permit being issued to PacifiCorp. I checked with the Division of Water Quality (DWQ) and found the UPDES permit for the Fossil Rock Mine is held by the current Permittee Fossil Rock Resources. I was informed DWQ is working to update their website to reflect this change in ownership. I have inquired with Mike Herkimer to get a copy of the UPDES permit to check on the issuance and expiration dates.

7. Coal Mine Waste, Refuse Piles, Impoundments

The Permittee has submitted a certified Coal Refuse Pile fourth quarter 2015 inspection report to the Division.

19. AVS Check

An AVS Check was performed on Canyon Fuel Company, LLC on September 8, 2015. No violations were retrieved in the system.

21. Bonding and Insurance

The Permittee signed a Reclamation Agreement with an Effective Date of 10/08/2015.

The mine holds a $1,154,000.00 bond with the Surety Ironshore Indemnity Inc.

The Permittee holds a Certificate of Liability that is effective 2/1/2016 and expires on 2/1/17. The limit for Each Occurrence is $2,000,000 and the General Aggregate is for $3,000,000.

ATTACHMENT A – Photos, March 8, 2016 Inspection

FIGURE 1
Location of photos taken at waste rock site.

PHOTO 2
Ditch DA is a box-cut channel with nearly vertical sides and a flat bottom.
Photo looks down channel.

PHOTO 3
Ditch DA is a box-cut channel with nearly vertical sides and flat bottom.
Photo looks up channel.

PHOTO 4
Ditch DA is a box-cut channel with nearly vertical sides and a flat bottom.

ATTACHMENT A – Photos

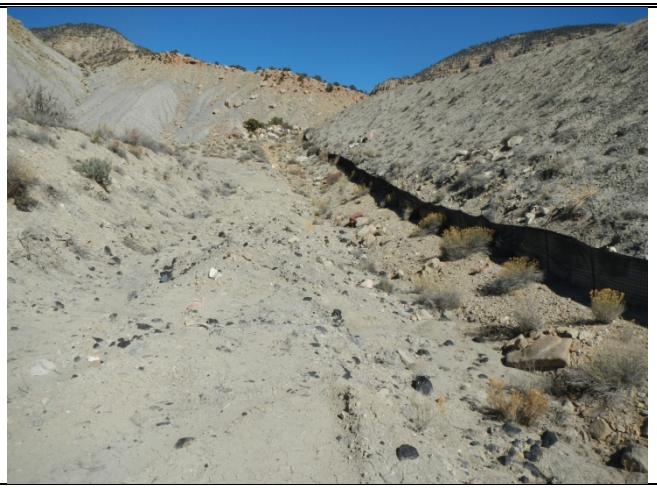

PHOTO 5
Ditch DB looking up-channel.
March 8, 2016

PHOTO 6
Ditch DB looking down-channel. Disturbance has filled in this ditch so it is non-existent in this location.
March 8, 2016

PHOTO 7
Subsoil recapture silt fence in need of maintenance
March 8, 2016

PHOTO 8
Uncontrolled drainage off Subsoil Stock Pile. No clear drainage paths are established in this area to direct flow to the silt fence.
March 8, 2016

ATTACHMENT A – Photos

PHOTO 9
Perimeter sign is too low on the post. View is obstructed by vegetation.
March 8, 2016

PHOTO 10
Top of inlet at mine site pond needing maintenance.
March 8, 2016

Volume 4, Appendix C, Drainage Control Design for Ditch DA and Ditch DB
See highlighted text below for design narrative.

Table 4-2.1: Diversion Peak Flow Rates

	Acres	Curve No.	Time of Concentrtation	Peak Flow
1A	26.3	82.6	0.162 hrs	18.9 cfs
1B	3.4	82	0.0973	2.52
1C	1.6	-		0.71
1D	0.9	-		
Total	**32.2 acres**			**22.13 cfs**

(Peak flows based on 100 year, 6 hour storm event of 2.2 inches)

Each ditch was designed to keep the velocity below 5 feet per second in order to prevent erosion. Ditch DA will be a V-ditch for the entire length until it approaches the pond where the slope increases from 2 to 18%. At that point, a wide trapezoidal ditch will be used with a rip-rap lining. Ditch DB will be a narrow trapezoidal ditch for its entire length. Both ditches will be monitored throughout the life of the facility for erosion and formation of gullies. If erosion does occur with the ditches, the applicant will repair any gullies and install velocity controls (i.e. rip-rap, gabions, etc.) as needed to correct the problem.

Rip-rap sizing for the steep section of ditch DA was taken from Utah State Department of Transportation Manual of Instruction, Part 4, Roadway Drainage, Section 4-610.30, Stable Channel Design. Using a stone diameter of 0.5 feet, Manning's n = 0.0305 from fig. 3-28, Utah DOT MOI Part 4 (Exhibit VII), the calculated depth of the flow is less than the stone diameter so use velocity against stone equal to the average velocity. (Exhibit VIII) Then entering the calculated velocity of 7.58 fps in fig. 3-30 (Exhibit IX) the required stone size for 2.5: 1 side slope is confirmed at the assumed size, i.e. 0.5 feet diameter for D_{50}.

Ditch DA

- V-ditch, 2.5:1 side slopes, 2% channel slope, Manning's n = 0.035, peak flow 18.9 cfs, depth 1.32 feet, velocity 4.34 feet/second.
- Trapezoidal, 10 foot bottom width, 2.5:1 side slopes, 18% channel slope, Manning's n = 0.0305, peak flow 18.9 cfs, depth 0.235 feet, velocity 7.58 feet/second, rip-rap D50 size = 0.5 feet.

Ditch DB

- Trapezoidal, 2 foot bottom width, 2.:1 side slopes, 12% channel slope, Manninng's n = 0.035, peak flow 2.52 cfs, depth 0.217 feet, velocity 4.59 fps.